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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,248	05/26/2006	Jun Gao	284530US0PCT	3427

22850 7590 07/15/2009

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
SALVITTI, MICHAEL A

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
07/15/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

ADVISORY ACTION

Response to Amendment

Amendments to claims 12, 13 and 19 have been entered to overcome U.S.C. 112 ¶ 2 issues, to reduce the issues for a possible appeal. The previous prior art rejections have been maintained.

Response to Arguments

Applicant's arguments filed July 1, 2009 have been fully considered but they are not persuasive.

A) The applicant argues (page 7, point "1") that neither reference suggests adding a portion of dispersant to water containing at least a portion of an oil-soluble free-radical initiator.

Costanza teaches adding water and initators to a reaction vessel (a_1, a_2 and c_5 col. 2, lines 24-32). The initators are stated to be oil-soluble (lypophilic; col. 6, lines 44-56). Dispersant (surfactant) is added in this stage (col. 2, lines 12-15). Monomers are metered into the pre-charged vessel (see addition of monomers as demonstrated in Example 3). This metering process has been interpreted as a "portion" as per the current claims.

B) The applicant argues (page 7, point "2") that neither reference teaches the water-soluble initiator active at T_s and the oil-soluble initiator as inactive at T_s.

While *Costanza* does not explicitly state this property, it can clearly be seen when considering Example 3 (col. 8). In this example, oil-soluble (benzoyl peroxide a.k.a. dibenzoyl peroxide in instant spec) and water-soluble (potassium persulfate a.k.a. potassium peroxydisulfate in instant specification) initiators are present. These initiators are said intrinsically have the requise properties as evident by their 10 hour half lives (page 7, lines 25 through page 8, line 26 of instant specification). KPS, with the lower 10-hour half-life is implicitly active at the starting temperature in *Costanza*, and the starting temperature is below that for benzoyl peroxide. Although not implicitly stated, the oil-soluble activator becomes active upon increasing temperature.

C) The applicant argues (page 7, point "3") that increasing polymerization temperature from T_s to T_E increasing the polymerization efficiency is not taught by the combination of references.

The term “polymerization efficiency” is neither disclosed in the instant specification nor in the instant claims. If solids content is intended to be the measure of polymerization efficiency, *Costanza* teaches a solids content (42-70%; *Costanza* table 1), within the range recited by instant claim 1, as well as conversion up to 99% (see *Costanza* Table 1). *Costanza* shows that temperature variance is tied to polymerization efficiency (col. 7, lines 1-18).

D) The applicant argues (page 7, point “4”) that one of ordinary skill would not be motivated to combine the teachings of *Costanza* and *Glück*, as they are drawn to different methods of polymerization.

In response to applicant's argument that *Glück* is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, *Costanza* teaches an emulsion polymerization analogous to that of the instant claims. *Glück* teaches a hybrid suspension/emulsion polymerization, as surfactants are added in at a higher temperature while polymerization is continued (see Examples); however *Glück* was cited as a reference for the reason that it is a comparable polymerization (using the same classes of monomers, initiators, and surfactants in aqueous media). *Glück* further teaches the criticality of the temperature above the boiling point of the polymerization medium as a means of lowering residual monomer content (col. 2, line 55 through col. 3, line 9). These references are analogous in their 1.) monomer selection; 2.) use of surfactants; 3.) use of two-initiator systems, wherein each initiator becomes activated at a different temperature.

E) The applicant argues (page 8, point "5") that *Costanza* teaches away from polymerization at high temperatures.

Costanza does favor the range of 20°C to 60°C, but recognizes that the polymerization can occur at temperatures over 80°C (col. 7, lines 1-10). *Glück* teaches the elevated temperature as an essential feature of patent '872 (col. 3, lines 1-9). At the time of the invention, it would have been obvious to a person having ordinary skill in the

art to increase the temperature in the invention of *Costanza*, as suggested by *Glück*, with the motivation of reducing the residual monomer content (*Glück* col. 3, lines 3-9).

F) The applicant argues (page 9, "Note 1") that step c_4 (addition of the total amount or, optionally the remaining amount of monomer) is a requisite step. *Costanza* teaches continually adding pre-emulsified monomers over a 2 hour period (col. 8, lines 40-45), which can be interpreted as adding the total amount or the remaining amount.

G) The applicant argues (page 10, "Note 2") that the amount of dispersant is not zero percent, as a portion is present. With regard to claim 17, Example 3 of *Costanza* shows the pre-charged vessel of Experiment 1, with the added stipulation of adding pre-emulsified monomers (the remaining portion) to the charged reaction vessel over time (see column 8). Example 1 shows 5 parts by weight sodium lauryl sulfate present in the first reaction stage. This amount is equal to 50%, which is recited within instant claim 17.

H) The applicant argues (page 10, section 1) that *Costanza* teaches mixing both water soluble and oil-soluble initiators containing no dispersant. Example 3, which is a repetition of Example 1, while adding pre-emulsified monomers over time, contains dispersant in the initial stage (see col. 8).

I) The applicant argues (page 11, section 2) that both initiators are active at the same temperature, 50°C. "Active" is a relative term, as free-radical initiators are unstable at all temperatures, although to a lesser degree at lower temperatures. The teachings of *Costanza* show heating to 50°C; KPS has a lower activation temperature than benzoyl peroxide based on the half-life, as admitted by the applicant.

J) The applicant argues (page 11, section 3) that *Costanza* does not teach activating the oil-soluble initiator.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., activating the oil-soluble initiator) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). *Costanza* does not specify whether the oil-soluble initiator becomes active to conduct a polymerization of residual monomers inside the polymer particles; however, this is not part of the claimed invention.

K) The applicant argues (page 11, section 3) that *Costanza*, does not teach polymerization above 80°C. Although unfavored, teaches polymerization above 80°C. *Glück* in light of *Costanza* suggests the combination, for the reasons given in point "E" above.

L) The applicant argues (pages 12-13) that *Glück* is non-analogous art.

The relevance of *Glück* is addressed in point D above.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL A. SALVITTI whose telephone number is (571)270-7341. The examiner can normally be reached on Monday-Thursday 8AM-7PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/M. A. S./
Examiner, Art Unit 1796

/David Wu/

Supervisory Patent Examiner, Art Unit 1796